

A KEY TO THE SPECIES OF *PATRITIUS* STÅL WITH THE
DESCRIPTION OF FOUR NEW SPECIES FROM SOUTH
AMERICA (HEMIPTERA: LYGAEIDAE)¹

JAMES A. SLATER

Systematic and Evolutionary Biology, University of Connecticut, Storrs,
Connecticut 06268.

Abstract.—The genus *Patritius* Stål is characterized. Ten of the eleven known species occur in South America, one is found in Cuba. A key to all species is included. Four new species are described—*P. fuliginus*, *P. ischnodemoides* and *P. englemani* from Brazil and *P. breviauris* from Peru. Notes are included on the status of *P. laevus* Stål and *P. colombianus* Slater and Wilcox. Dorsal view figures are included for *P. englemani*, *P. fuliginus*, and *P. breviauris*.

The members of the genus *Patritius* Stål are large robust blissine bugs characterized by having all femora multispinose, usually elongate scent gland auricles, eyes protruding on short lateral head extensions, terete antennae, straight apical corial margins, and closed fore coxal cavities. The pruinosity patterns are variable.

The systematic position of the genus within the Blissinae and a preliminary cladistic analysis of the species will be included in a forthcoming general analysis of the Blissinae. The present paper provides a key to all of the known species and describes four new species from South America. Though these species are described from only one or two specimens, they are all quite distinct from each other and from any of the described species. Further, their descriptions are important as they include what I believe to be the "most plesiomorphic" and "most apomorphic" species within the genus.

A summary of the history of the genus is given by Slater and Wilcox (1966) and is not repeated here. A new key to species is provided to include the new species described below. All measurements given are in mm.

Ten of the eleven known species occur only in South America and the

¹ This work was supported by a grant in aid from the National Science Foundation.

other on Cuba. This pattern occurs in other taxa of Heteroptera and probably indicates a vicariant event in that part of Cuba may well have been the only area in the West Indies that was not submerged sometime during the middle Tertiary.

KEY TO THE SPECIES OF *PATRITIUS*

1. Metathoracic scent gland auricle short and lobate, not extending dorso-laterally to middle of metapleuron; legs completely light yellow (Fig. 3) *breviauris*, new species
- Metathoracic scent gland auricle elongate extending far dorso-laterad of middle of metapleuron, or if somewhat shorter then distal ends of femora black 2
2. Metathoracic scent gland auricle curving posteriorly 3
- Metathoracic scent gland auricle curving anteriorly 6
3. Pronotum with alternating bands of shining and dull pruinose surface texture *alternatus* Slater and Wilcox
- Pronotum entirely shining black 4
4. Entire scutellum completely shining, non-pruinose (Fig. 1) new species
- Median carina of scutellum shining, remainder pruinose 5
5. Either antennal segment 2 or 3 considerably longer than any individual labial segment *colombianus* Slater and Wilcox
- Either 2nd or 3rd antennal segment subequal to or shorter than any individual labial segment *cubensis* Barber
6. Pronotum posteriorly completely pruinose between humeri *longispadix* Slater and Wilcox
- Pronotum posteriorly with extensive shining non-pruinose areas present between humeri 7
7. Pronotum posteriorly with a narrow pruinose area separating elongate median transverse shining areas from ovoid shining humeral areas *grossus* Haglund
- Pronotum posteriorly with a completely shining stripe across humeri 8
8. Shining areas on anterior pronotal lobe extending broadly over and slightly below lateral margins of pronotum; labial segment 2 considerably longer than segment 3 *fuscovenosus* Stål
- Shining areas of anterior pronotal lobe not broadly attaining lateral margins, if approaching margins then labial segment 2 shorter than segment 3 9



S. THORNTON

9. Labium more elongate extending well between or slightly beyond fore coxae, 2nd segment longer than segment 3 *laevus* Stål
 – Labium very short not or scarcely extending posteriorly to fore coxae, segment 2 shorter than segment 3 10
10. All tibiae and femora dark chocolate brown; length of 2nd antennal segment greater than or subequal to interocular distance; veins of membrane black, strongly contrasting with infuscated dark coloration on membrane surface (Fig. 2) *fuliginus*, new species
 – All tibiae and femora uniformly pale yellow; interocular space considerably greater than length of 2nd antennal segment; veins of membrane concolorous in infuscated portion of membrane surface *ischnodemoides*, new species

Patritius englemani Slater, NEW SPECIES

Fig. 1

Description.—General coloration black to dark castaneous, surface strongly polished and shining. Clavus and corium a strongly contrasting bright yellow, latter suffused with dark chocolate brown along apical margin. Membrane black basally becoming an admixture of yellow and black to chocolate brown over most of surface. Tibiae, tarsi, and an obscure ovoid spot on humeri castaneous. Labium light yellow. Body with pruinosity limited to prosternum anterior to fore coxae where it tapers mesially from dorsal margin of underside of head to just before and below anterior acetabula.

Head with eyes small, semi-transverse, set on short narrow stalks, vertex strongly convex, tylus almost attaining distal end of 1st antennal segment, length head .96, width across eyes 1.32, interocular space .80. Pronotum broad, transverse impression obsolete mesially, lateral margins sinuately arcuate, posterior margin very shallowly concave, anterior lobe nearly impunctate, posterior lobe with scattered small punctures but impunctate between humeri, length pronotum 1.44, width 2.04. Scutellum with T-shaped elevation, length scutellum .80, width .60. Hemelytra with lateral corial margins markedly tapering caudad of level of abdominal tergum 2, membrane reaching only onto anterior portion of terga 7, abdominal connexivum broadly exposed for most of length, distance apex clavus–apex corium 1.52, distance apex corium–apex abdomen 2.32. Metathoracic scent gland auricle slightly curved posteriorly, very similar in appearance to that of *P. colombianus*. All femora strongly incrassate and armed below with 2 rows of sharp spines, fore femora with a very large spine near distal end of outer row. Labium extending between but not beyond mesocoxae 1st segment reaching base of head; length labial segments I .60, II .58, III .68, IV .64. Antennae only moderately stout, terete, length antennal segments I .28, II .60, III .62, IV 1.12. Total length 7.20.

Holotype.—♂. BRAZIL: Mato Grosso 10°25'S, 59°28'W, 17–22.III.[19]77; 300 m (D. Engleman). In American Museum of Natural History, New York.

Remarks.—This species is most closely related to *P. colombianus* agreeing with the latter in the possession of a completely shining pronotum, a similarly shaped scent gland auricle, and markedly projecting semistalked eyes. *Patritius englemani* is readily separable from *P. colombianus* by virtue of the completely shining non-pruinose scutellum and relatively much longer third labial segment which is longer than either segments two or four, whereas in *P. colombianus* segment three is subequal in length to segments two and four. This elongation of the third labial segment will also separate *P. englemani* from *P. cubensis*.

Patritius ischnodemoides Slater, NEW SPECIES

Description.—General coloration a combination of reddish brown, gray, and pale testaceous. Head, pronotum, and scutellum largely gray pruinose. Tylus, a pair of large subtriangular calli patches well separated mesially and not attaining lateral margins, a complete narrow band posteriorly across pronotum, and a narrow longitudinal mesal stripe on distal $\frac{3}{4}$ of scutellum contrastingly shining. Hemelytra variegated, clavus nearly uniformly dark red brown, very narrowly pale along claval suture, corium pale yellow with median vein, entire distal $\frac{1}{3}$ of corium, and apical corial margin dark red brown; membrane chiefly dark brown with a contrasting irregular yellow macula adjacent to apex of each corium. Pleural and ventral surfaces of head and prothorax completely pruinose. Meso- and metapleura pruinose but mesosternum broadly shining as is posterior lobe of metapleuron. Anterior acetabula pruinose, meso- and meta-acetabula shining. Legs and antennae uniformly bright orange yellow. Abdomen reddish brown, becoming paler along connexival margins. Head, pronotum, and scutellum evenly conspicuously punctate, a few scattered inconspicuous semidecumbent sericeous hairs present.

Head very slightly declivent, tylus reaching at least to middle of subglobose 1st antennal segment; eyes set on very slightly produced lateral head extensions, vertex moderately convex, length head .64, width .88; interocular space .58. Pronotum nearly evenly tapering from humeral area to anterior margin, weakly sinuate, posterior margin shallowly concave, transverse impression shallow but present, length pronotum 1.28, width 1.60. Length scutellum .70, width .82. Hemelytra with lateral corial margins very slightly sinuate, broadest a short distance posterior to distal end of claval commissure, radial vein elevated and shining on proximal $\frac{3}{4}$, membrane reaching only to distal end of abdominal tergum 6, connexivum broadly exposed laterally, distance apex clavus–apex corium 1.40, distance apex corium–apex abdomen 3.0. Metathoracic scent gland auricle elongate, linear, slightly enlarged and curving anteriorly at distal end. All femora moderately

incrassate, armed below with spines, those on fore femora large and with a very prominent spine on inner rank $\frac{1}{3}$ way from distal end. Labium short, 3rd segment barely attaining base of head, 4th segment extending over anterior portion of prosternum. length labial segments I .30, II .16, III .20, IV .24. Antennae terete, 4th segment very elongate, length antennal segments I .18, II .44, III .42, IV .86; total length 7.52.

Holotype.—♀. BRAZIL: Pirassununga, São Paulo (Schubart). In Museu Nacional, Rio de Janeiro, Brazil.

Remarks.—This is a remarkable species and in general habitus closely resembles members of the *Ischodemus tibialis* group, much more so than other species of *Patritius*. It is elongate, slender, not markedly robust, with rather short legs and antennae. However, this specimen should be referred to the genus *Patritius* as it has all of the essential generic characters. This is particularly true of the metathoracic scent gland auricle which is elongate, slender, and curves slightly forward just as it does in a number of other species of *Patritius*. Also the slightly stalked eyes, the very elongate fourth antennal segment, and, of course, the multispinose middle and hind femora are all characteristic of the genus *Patritius*. Unfortunately, no males of this species are available to ascertain the condition of the sperm reservoir.

Patritius fuliginus Slater, NEW SPECIES

Fig. 2

Description.—General coloration dark reddish brown. Head, pronotum, and scutellum chiefly gray pruinose. Tylus, a pair of large quadrate calli spots confluent mesially but not attaining lateral margins, a large broad complete transverse stripe across posterior portion of pronotal area, and median longitudinal elevation on posterior $\frac{3}{4}$ of scutellum polished and shining. Calli area black, remaining shining areas castaneous to bright reddish brown. Hemelytra completely pruinose except for shining proximal $\frac{4}{5}$ of radial vein; clavus and corium chiefly testaceous to reddish brown; cubital and medial veins darker brown; corial surface becoming suffused with reddish distally and with apical margin darkened for entire length. Membrane ground color pale yellow with veins nearly black, a broad reddish-brown area present adjacent to apical corial margin marked with a large brown macula, present on most of membrane caudad of level of apices of coria, these 2 darkened areas on membrane separated by a broad yellow lunate vitta near level of apex of corium. Below completely pruinose on head, pronotum, and prothorax, meso- and metapleuron also pruinose but mesosternum broadly shining as are all acetabula and posterior lobe of metapleuron. Abdomen, femora, and tibiae uniformly castaneous, with abdominal connexivum and tarsi yellow. Antennal segments 1, 2, and 3 dark castaneous, segment 4 almost black. Dorsal surface with numerous small inconspicuous punctures present.

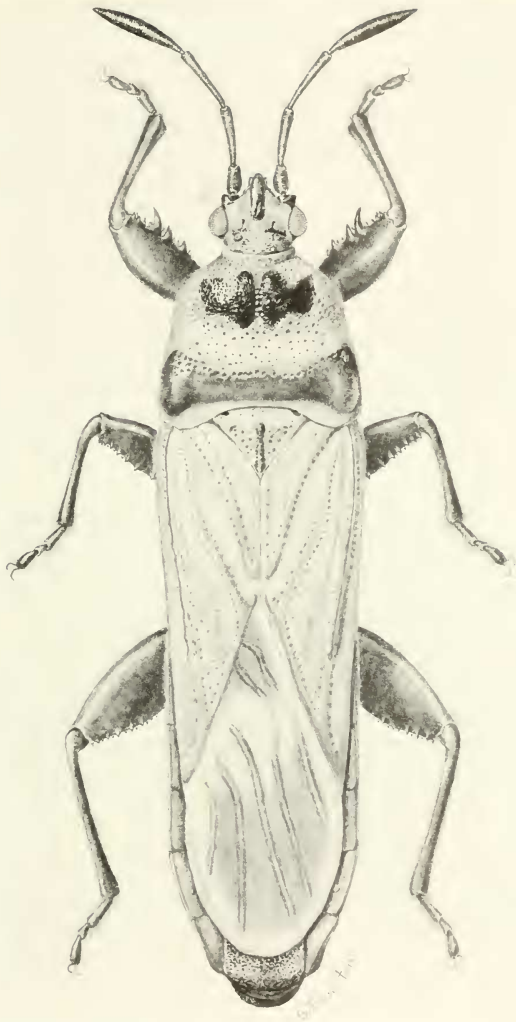


Fig. 2. *Patritius filigineus*, dorsal view.

Head nondeclivent, eyes not produced laterad on short stalks, tylus reaching midway to distal end of 1st antennal segment, length head .60, width 1.03; interocular space .60. Pronotum similar to *P. laevus* in shape, strongly converging anteriorly; calli swollen, raised above level of rest of pronotum; transverse impression complete but shallow, posterior margin deeply concave, length pronotum 1.58, width 2.05. Length scutellum .95, width 1.03. Hemelytra with lateral corial margins straight; distance apex clavus-apex corium 2.03, distance apex corium-apex abdomen 2.6; membrane extending onto middle of 7th abdominal segment. Metathoracic scent gland auricle slender, elongate, moderately directed dorso-anteriorly. All femora strongly incrassate and spined below, hind femora particularly strongly incrassate, fore femora armed below with 2 rows of spines, middle spine of inner row extremely elongate. Labium very short, not or scarcely reaching fore coxae, 2nd segment remote from base of head, length labial segments I .33, II .20, III .25, IV .30. Antennae conventionally elongate, terete, 4th segment narrowly fusiform, length antennal segments I .28, II .63, III .65, IV 1.05; total length 8.70.

Holotype.—♂. BRAZIL: Minas Geraes, Passa Quatro, XII-1972 (F. Oliveira). In American Museum of Natural History, New York.

Paratype.—♂, same data as for holotype. In J. A. Slater collection.

Remarks.—There is almost no variation between the holotype and paratype specimens. *Patritius fuliginus* can be readily separated from *P. fuscovenosus* because of the lack of elongate hairs on the dorsal surface of the body, the much smaller size, the much shorter labium, and the dark colored membrane. In *P. fuscovenosus* the dorsal surface contains numerous elongate hairs which are also present on the appendages, the labium extends well between the fore coxae, and the membrane is pale yellow with the exception of the somewhat infuscated light tan veins and a dark reddish-brown area along the apical corial margin. Actually *P. fuliginus* is much more closely related to *P. laevus* which also occurs in the province of Minas Geraes and which has similar shining calli patches (although in *P. laevus* they are well-separated mesally), a very similar scent gland, similarly shaped pronota, eyes, etc. From *P. laevus*, *P. fuliginus* may be readily separated since *P. laevus* has a nearly uniformly pale testaceous hemelytra including the membrane, a much longer labium which extends well between or slightly beyond the fore coxae, and the tibiae and femora are either pale yellow or at most infuscated with castaneous on the distal portions of the femora.

Patritius laevus Stål

This species as currently understood may be composite or show considerable geographic variation. I have recently examined three specimens from Santa Barbara (Minas Geraes), Brazil taken at 1450 m in the Serra do Caraco

that have relatively much shorter and distally truncate metathoracic scent gland auricles than do other specimens studied. Usually the auricle of *P. laevus* is elongate and curves anteriorly in a long arc. However, there is considerable variation in shape. These Santa Barbara specimens also have dark caudolateral angles to abdominal connexiva 4, 5, and 6, infuscations on the membrane, and more strongly contrasting hemelytral punctures than do other specimens. They may represent a distinct species but more material will be necessary to determine this.

Patritius brevicauris Slater, NEW SPECIES

Fig. 3

Description.—General coloration bright yellow. Head and anterior pronotal lobe except collar strongly contrasting black. Distal portion of tylus pale yellow. Head (except tylus), anterior portion of anterior pronotal lobe, and a broad band across mesal area of pronotum pruinose. A broad shining black stripe across area of calli including lateral margins of pronotum and broadly confluent mesally and a pale broad complete shining humeral band. Scutellum non-pruinose. Hemelytra chiefly pale yellow to nearly white marked with dark chocolate brown on cubital and medial veins. Distal portion of corium (extending as a diffuse line to level of apex of claval commissure adjacent to pale radial vein) and entire apical margin dark chocolate brown. Membrane with ground color yellow but strongly and irregularly suffused with dark brown over most of surface, veins chocolate brown. Pleural and ventral surfaces chiefly pruinose including anterior acetabula but shining on mesosternum, as an anterior stripe on mesopleuron, and all of posterior lobe of metapleuron. Abdomen bright reddish brown with connexivum pale yellow. Legs uniformly pale yellow. First antennal segment pale yellow, 2nd segment reddish brown, 3rd and 4th segments dark castaneous. Clothed with scattered semi-upright hairs especially a long series of setae-like hairs present distally along apical corial margin. Head, pronotum, and hemelytra with small inconspicuous punctures present, those on scutellum larger.

Head moderately declivent, tylus extending to distal $\frac{1}{3}$ of rather globular 1st antennal segment; eyes produced on short, thick, upturned stalks; vertex moderately convex; length head .45, width .95; interocular space .63. Pronotum with lateral margins strongly sinuate moderately tapering anteriorly, lateral margins of anterior lobe somewhat globose, transverse impression shallow but complete; posterior margin deeply concave; length pronotum 1.40, width 1.8. Scutellum with a well raised median elevation; length scutellum .98, width .90. Hemelytra with lateral corial margins straight; radial vein shining, prominently elevated; distance apex clavus-apex corium 1.52, distance apex corium-apex abdomen 2.48. Membrane extending midway over 7th abdominal tergum. Metathoracic scent



Fig. 3. *Patritius breviauris*, dorsal view.

gland auricle short, stout, lobate, slightly angled anteriorly but not strongly curving. All femora moderately incrassate armed below with sharp spines, those on middle and hind femora in a simple row, those on fore femora in 2 rows of large coarse sometimes bifurcating spines. Labium extending to or nearly to posterior margin of fore coxae, 2nd segment exceeding base of head; length labial segments I .33, II .30, III .25, IV .33. Antennae robust, conventionally terete, 4th segment elongately fusiform; length antennal segments I .20, II .53, III .53, IV 1.0. Total length 7.8.

Holotype.—♀. PERU: Quincemil, Sept. 1952 (L. E. Pena). In National Museum of Natural History, Washington, D.C., USNM Type No. 73794.

Remarks.—This species is not closely related to any of the other members of the genus. Unfortunately no males of this species are known. The very short subauricular scent gland auricle is quite unlike that found in any other member of the genus *Patritius* and makes the affinities obscure.

Patritius alternatus Slater and Wilcox

This species was described by Slater and Wilcox (1966) from a single female in the Berlin-Humboldt Museum from Colombia. We (p. 41) commented on the importance of examining a male to ascertain whether or not genal "tusks" were present, this feature being characteristic of the Papuan genus *Dentisblissus* whose members *Patritius alternatus* resembles in general habitus and in pruinosity pattern.

Through the kindness of Dr. R. M. Baranowski, I examined a male taken August 8, 1978 at Morne Bleu, Trinidad. This male resembles the holotype female very closely in color and structure. It lacks genal tusks, and thus I presume the pruinosity pattern similarities between this genus and species of *Dentisblissus* are the result of convergent, or perhaps better, parallel evolution.

ACKNOWLEDGMENTS

My sincere appreciation is extended to the following for the loan of material: Dr. R. M. Baranowski (University of Florida, Homestead); Dr. J. C. M. Carvalho and Mr. J. Becker (Museu Nacional, Rio de Janeiro); Dr. Dodge Engleman (Coco Solo Hospital, Canal Zone); Dr. R. E. Froeschner (National Museum of Natural History, Washington, D.C.) and Dr. R. T. Schuh (American Museum of Natural History, New York).

I am grateful to Mr. Steven Thurston (University of Connecticut, Storrs) for preparation of the illustrations.

LITERATURE CITED

- Slater, J. A. and D. B. Wilcox. 1966. A revision of the genus *Patritius* (Hemiptera: Lygaeidae). Occas. Pap. Univ. Conn. (Biol. Sci. Ser.) 1(1):25-42.